

Spruce Creek AITR Capstone Projects

9th Grade Projects

Skills, Teamwork & Critical Thinking – Needs to be created. Dress, assessment, etiquette, email

Deliverable: 8th Grade Team Building Day

IT Project 1 – Programming – FCAT Project– Alice Short Animation

Deliverable: 3-D Animation

From Concept to Consumer-

Deliverable: A product & design process, keep an engineering notebook, building a bicycle for the future, create a presentation to show the process, pictures... invite local bike shop owners, an extreme biker to judge

IT Project 2 – Web Design

Deliverable: Information website about career

IT Project 3 – Fire Alarm – Smoke alarm system for school restrooms. Presentation to sell product.

Deliverable: Prototype Fire Alarm System

Energy from the Sun – Biomass – Bio-fuel generator

Deliverable: Biomass stove per assigned country

10th Grade Projects

Module 2 – Media & Messages

Deliverable: Advertising Campaign for the AITR (Showcase materials, brochures, business cards, marketing materials)

Module 3 – People at Work

Deliverable: Communicate with a person from another state and report on findings, blog, create a website showing historical revolution of workplace.

Module 10 – Reverse Engineering

Deliverable: Reverse engineer something (this oil spill catastrophe – give list of disasters to choose from) build a model, with a presentation, explain how it could have been built better, engineering log, have an engineer come speak,

Module 11 – Different by Design

Deliverable: Redesign of an existing product. Allow them to choose a product. Interview handicapped people – what is the biggest obstacle. Have ARC come and speak to students Assoc. Retarded Citizens- model, prototype, CAD design, sketch..document through forum, (spend time “disabled”)- post on a discussion forum. Also a presentation documenting what they did to create the product.

We All Run on Energy

Deliverable: Lesson plan, teach to another class younger than them

Is Hydrogen a Solution?

Deliverable: Embry-Riddle? Hydrogen, hybrid car- will they let us work with them?

Presentation to an energy company on which company they should choose, then construct a hydrogen powered model car and race them.

11th Grade Projects

Module 7 – Planning for Business Success

Deliverable: Business plan for their own business to attract venture capital.

Module 6 – Planning for Efficiency

Deliverable: Review efficiency of local company and present results. LAN Party.

Module 9 – From Data to Knowledge

Deliverable: Evaluate current information systems – Presentation. Programming Project- create a database, write a program

Module 5 – Closing the Environmental Loop

Deliverable: Present proposals for redesigning a product to make it more environmentally sustainable. Computer Parts? Redesign a products manufacturing process to make it more environmentally friendly, give presentation on how they redesigned. Engineering log, Create a product design cycle (illustrate through CAD- what they have changed). Re-do the process of the school cleaning (re-design them)- so they can more easily recycle.

Module – Nuclear Revolution

Deliverable: Presentation – Fake town contemplating whether to build a nuclear power plant.

Debate? Nuclear power the school? Town Hall meeting/ get politicians to attend.

Module 4 – Careers, Companies & Communities

Deliverable: Career Expo – invite businesses to exhibit, invite 8th graders.

12th Grade Projects

Module - Calculating Your Future/Personal Finance

Deliverables: Budget 1st year salary. Mystery envelope. Budget – critique and plan for next year.

Module 13 – The Wealth of Nations

Deliverables: Presentation on feasibility of locating a branch in another country.

Module 14 – Markets without Borders

Deliverables: Handbook – English & Spanish. Mobile phone app, conversions, facts about country, translator, gps... travelers from 18 - 25

Module 15 – Global Citizens

Deliverables: Presentation on changes to make their company better global citizens. Choose a business partner, research what they do as a “global citizen”, consult on how to improve upon their global citizenship. Research what other companies do when they move in to other countries- give recommendation for company on entering another country.

Module 8 – Ensuring Quality

Deliverables: Statistical Presentation, did the tardies increase/decrease over the year. Collect data, compute statistics, make a generalization.

Module 12 – Energy for the Future

Deliverables: Design alternative energy system to light the school. Present to school board.

*Adapt presentations recommended for schools to 8th grade instead of elementary to target students who might be interested in the AITR.